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EXAMINER	
INGBERG, TODD D	

ART UNIT	PAPER NUMBER
2124	4

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/259,179	SCHNEIDER ET AL.	
	Examiner	Art Unit	
	Todd Ingberg	2124	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *17 March 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *23-25,27-33,35-40 and 42-45* is/are pending in the application.

4a) Of the above claim(s) *26,34,41* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claims 26, 34 and 41 have been canceled.

Claims 23-25,27-33, 35-40 and 42-45 have been examined.

Drawings

1. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed OR upon filing of a Request For Continued Examination (RCE).

Requirement For Information

2. The Requirement For Information (RFI) has been received and completes the requirement. Previously, paper # 3 was thought to be a missing Information Disclosure Statement(IDS) of February 26, 1999.

Specification

3. The new title of the invention has been entered.

4. The new abstract has been entered.

Claim Rejections - 35 U.S.C. § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Prior rejection to claims 26, 34 and 41 have been overcome by claim cancellation.

Claim Rejections - 35 U.S.C. § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 23 - 30 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over the commercial product Rational Rose 4.0 released in 1996 in view of Steinman et al. USPN 6,259,958 filed December 19, 1997.

Rational Corporation's product **Rational Rose C++ version 4**, released in December 24, 1996. Rational Rose C++ version 4.0 contains a *document set* containing the following documents:

- Round-Trip Engineering with Rational Rose/C++(Not used in this office action)
- **Using Rational Rose 4.0** (Referenced as **Rat-UR**)
- Extensibility Guide (Not used in this office action)
- Extensibility Reference Manual (Not used in this office action)
- UML, Booch & OMT Quick Reference for Rational Rose 4.0 (Referenced as **Rat-QT**)

The product Rational Rose 4.0 was obtained by the Electronic Information Center (EIC) of the USPTO. The product arrived shrink wrapped in a box with a Compact Disk (CD) containing the distribution software (executables and dynamic link libraries (DLLs) to perform the features and functions described in the document set. The product with the documentation set constitute a product that has been for sale or for use. The products release date for more than one than the effective filing date.

Prior Rejection is maintained and repeated below.

Claim 23

Rational Rose teaches using an object oriented Computer Aided Software Engineering (OO-CASE) tool for defining a mode of a control system(**Rose**, page 13, Diagram Windows - list of design tools), said method comprising: receiving a plurality of components that represent said control system (**Rose**, page 7, class view in browser) ; choosing a subset of said components to correspond to said mode (**Rose**, page 6 and 7, the ability to select from the list of classes in the browser); identifying an intuitive name for said mode and its corresponding subset of said components (**Rose**, page 7, the ability to name a class as shown in the diagram "My Class 1"); and for each chosen component in said subset (**Rose**, page 6, class view in browser), indicating in a file corresponding to said component (**Rose**, page 199, Documentation Report - documentation underlying the model) that said component is active when said control system is in said mode (**Rose**, page 7 shoes the components which have been selected "active" in the window and page 199 shows the underlying documentation for the project which is automatically generated), whereby when said control system is executing in said mode, only said subset of said components that correspond to said mode will be active (**Rose**, page 177, code generation based on OO modeling). Although, the term control system is met by the **Rational Rose** in the broadest reasonable interpretation in view of the specification as a software system for controlling a real world solution. What **Rational Rose** does not explicitly teach is the context of a control system for controlling external devices/ interfaces. It is **Steinman** who explicitly teaches the tool set as

supporting interfaces to external devices such as actuators and sensors (Steinman, Figure #3) . Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Rational Rose 4.0 with **Steinman** because object oriented technology allows for linking of the pieces of a system (**Steinman**, col 1, lines 26 - 32).

Claim 24

A method as recited in claim 23 wherein said control system is an electromechanical control system (**Steinman**, Col 4, lines 5 - 15, process controllers to control sensors and actuators).

Claim 25

A method as recited in claim 23 wherein said control system is a real-time control system (**Steinman**, Col 1, Technical Field of the Invention).

Claim 27

A method as recited in claim 23 wherein said received components represent a low level in a multi-level hierarchy of said control system (**Steinman,** Figure 3, sensors and actuators are receivers and attached to Application blocks in an Object Oriented system), said method further comprising: presenting a high level of said hierarchy, said high level including said received components and a high level component; choosing a second mode for said high level component; and choosing a third mode for said control system that includes said mode and said second mode, whereby when said control system is executing in said third mode, only those components that correspond to said mode and said second mode will be active (Interpreted as the Principles of inheritance which is part of the rejection in claim 1 with the association of the software generated

and the principle of Messaging in Object Oriented technology - both principles are inherent in Object Oriented technology).

Claim 28

A method as recited in claim 23 wherein said components are computer objects and said control system is implemented using object-oriented technology (**Steinman**, Col 1, Technical Field of the Invention).

Claim 29

A method as recited in claim 23 wherein said components are loaded into a real time computer, said method further comprising: executing said control system in said mode on said real-time computer (**Steinman**, Col 1, Technical Field of the Invention); and activating only those components which correspond to said mode (Interpreted as the Principles of inheritance which is part of the rejection in claim 1 with the association of the software generated and the principle of Messaging in Object Oriented technology - both principles are inherent in Object Oriented technology).

Claim 30

A method as recited in claim 29 further comprising: switching from said mode to a different mode while said control system is executing; deactivating those components that correspond to said mode; and activating those components that correspond to said different mode (Interpreted as the Principles of inheritance which is part of the rejection in claim 1 with the association of the

software generated and the principle of Messaging in Object Oriented technology - both principles are inherent in Object Oriented technology).

Claim 45

Rational Rose teaches using an object oriented Computer Aided Software Engineering (OO-CASE) tool for defining a method of mapping an executable image destined for a particular computer to components within a control system (**Rose**, page 13, Diagram Windows - list of design tools) , said method comprising: receiving a plurality of components in a multi-level hierarchy that represent said control system (**Rose**, page 7, class view in browser- also "class hierarchy" by definition); defining at least one logical executable name at each level in said multi-level hierarchy (**Rose**, page 7, the ability to name a class as shown in the diagram "My Class 1"); for each component in a level of said multi-level hierarchy (**Rose**, page 7, class view in browser), assigning said component to one of said logical executable names;
and mapping said executable image destined for said particular computer through said multi-level hierarchy using said logical executable names such that a subset of said components are assigned to said executable image (**Rose**, page 177, code generation based on OO modeling), whereby said executable image includes said subset of components (**Rose**, page 177, code generation based on OO modeling - note the reference to aggregation - a term for inherintence in Object Oriented technology). Although, the term control system is met by the **Rational Rose** in the broadest reasonable interpretation in view of the specification as a software system for controlling a real world solution. What **Rational Rose** does not explicitly teach is the context of

a control system for controlling external devices/ interfaces. It is **Steinman** who explicitly teaches the tool set as supporting interfaces to external devices such as actuators and sensors (Steinman, Figure #3) . Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Rational Rose 4.0 with **Steinman** because object oriented technology allows for linking of the pieces of a system (**Steinman**, col 1, lines 26 - 32).

8. Claims 31 - 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rational Rose** and **Steinman** as applied to claim 23 - 30 and 45 above, and further in view of **Gretta** et al (USPN 5,971,581).

Claim 31

Rational Rose teaches a method of mapping a thread of a processor to components within a control system (**Rose**, page 177, code generation based on OO modeling), said method comprising: receiving a plurality of components in a multi-level hierarchy that represent said control system (**Rose**, page 7, class view in browser); defining a logical rate of execution at each level in said multi-level hierarchy (**Gretta,** Figure 8 and 9A - basic blocks are components of an executable image); for each component in a level of said multi-level hierarchy (Object Oriented implementation of Rational Rose and Steinman where the class hierarchies when instantiated into objects implement the model as per (**Rose**, page 177, code generation based on OO modeling), assigning said component to one of said logical rates (**Gretta,** Figure 8 and 9A - basic blocks are components of an executable image); and mapping said thread of said processor

through said multi-level hierarchy such that at least one of said components is assigned to said thread (**Gretta,** Figure 8 and 9A - basic blocks are components of an executable image), whereby an execution rate of said thread is assigned to said least one component (**Gretta,** Figure 8 and 9A - basic blocks are components of an executable image). Although, the term control system is met by the **Rational Rose** in the broadest reasonable interpretation in view of the specification as a software system for controlling a real world solution. What **Rational Rose** does not explicitly teach is the context of a control system for controlling external devices/ interfaces. It is **Steinman** who explicitly teaches the tool set as supporting interfaces to external devices such as actuators and sensors (Steinman, Figure #3) . Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Rational Rose 4.0 with **Steinman** because object oriented technology allows for linking of the pieces of a system (**Steinman**, col 1, lines 26 - 32). OO-CASE tools for developing Control Systems is intended use of the commercial product Rational Rose. However, neither references teach changing the execution control of a thread. It is **Gretta** who teaches the ability for a user to alter rate of execution for threads (Note basic blocks are the components of threads). Therefore it would have been obvious to combine the teachings of an object oriented tools kit as taught bu Rational Rose and Steinman with Gretta's ability to control thread execution rate because the ability to control devices in an automated process is essential for proper operations.

Claim 32

A method as recited in claim 31 wherein said control system is an electromechanical control system (**Steinman**, Col 4, lines 5 - 15, process controllers to control sensors and actuators).

Claim 33

A method as recited in claim 31 wherein said control system is a real-time control system (**Steinman**, Col 1, Technical Field of the Invention).

Claim 35

A method as recited in claim 31 wherein said components are computer objects and said control system is implemented using object-oriented technology (**Steinman**, Col 1, Technical Field of the Invention).

Claim 36

A method as recited in claim 31 wherein said components are loaded into a real time computer (**Steinman**, Col 1, Technical Field of the Invention), said method further comprising: executing said control system on said real-time computer; and executing said at least one component at said rate of execution which corresponds to said thread (**Gretta,** figure 8 - teaches the link master function block and the block schedule and figure 39 shows the interval set for a Process ID (PID - well known to be associated with an executable image).

Claim 37

Rational Rose teaches a method of mapping threads available on a real-time computer to components within control system (**Rose**, page 177, code generation based on OO modeling),

said method comprising: receiving a plurality of components in a multi-level hierarchy that represent said control system (**Rose**, page 7, class view in browser and the design of the system in the development window with "My Class 1"); **Gretta** teaches defining at least one logical rate of execution at each level in said multi-level hierarchy (**Gretta,** Figure 8 and 9A - basic blocks are components of an executable image); for each component in a level of said multi-level hierarchy (Object Oriented implementation of Rational Rose and Steinman where the class hierarchies when instantiated into objects implement the model as per (**Rose**, page 177, code generation based on OO modeling), assigning said component to one of said logical rates (**Gretta,** Figure 8 and 9A - basic blocks are components of an executable image); and mapping said threads of said real-time computer through said multi-level hierarchy using said logical rates such that each of said components is assigned to a single one of said threads (**Gretta,** Figure 8 and 9A - basic blocks are components of an executable image), whereby an execution rate of each thread is assigned to each one of said components (**Gretta,** Figure 8 and 9A - basic blocks are components of an executable image). Although, the term control system is met by the **Rational Rose** in the broadest reasonable interpretation in view of the specification as a software system for controlling a real world solution. OO-CASE tools for developing Control Systems is intended use of the commercial product Rational Rose. What **Rational Rose** does not explicitly teach is the context of a control system for controlling external devices/ interfaces. It is the object oriented tool kit of **Steinman** who explicitly teaches the tool set as supporting interfaces to external devices such as actuators and sensors (Steinman, Figure #3) . Therefore, it would have

been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Rational Rose 4.0 with **Steinman** because object oriented technology allows for linking of the pieces of a system (**Steinman**, col 1, lines 26 - 32). However, neither references teach changing the execution control of a thread. It is **Gretta** who teaches the ability for a user to alter rate of execution for threads (Note basic blocks are the components of threads). Therefore it would have been obvious to combine the teachings of an object oriented tools kit as taught bu Rational Rose and Steinman with Gretta's ability to control thread execution rate because the ability to control devices in an automated process is essential for proper operations.

Claim 38

Rational Rose teaches a method of defining an executable image for a control system(**Rose**, page 13, Diagram Windows - list of design tools), said method comprising: receiving a plurality of components that represent said control system (**Rose**, page 7, class view in browser and the design of the system in the development window with "My Class 1"); choosing a subset of said components (**Rose**, page 6 and 7, the ability to select from the list of classes in the browser) to correspond to said executable image (**Rose**, page 177, code generation based on OO modeling); identifying a name for said executable image and its corresponding subset of said components; and for each chosen component in said subset (**Rose**, page 7, the ability to name a class as shown in the diagram "My Class 1"), indicating in a file corresponding to said component that said component is part of said executable image for said control system whereby when said executable image is produced for said control system only said subset of said components that

correspond to said executable image will be included (**Rose**, page 177, code generation based on OO modeling). Although, the term control system is met by the **Rational Rose** in the broadest reasonable interpretation in view of the specification as a software system for controlling a real world solution. What **Rational Rose** does not explicitly teach is the context of a control system for controlling external devices/ interfaces. It is **Steinman** who explicitly teaches the tool set as supporting interfaces to external devices such as actuators and sensors (Steinman, Figure #3) . Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Rational Rose 4.0 with **Steinman** because object oriented technology allows for linking of the pieces of a system (**Steinman**, col 1, lines 26 - 32).

However, neither references teach changing the execution control of a thread. It is **Gretta** who teaches the ability for a user to alter rate of execution for threads (Note basic blocks are the components of threads). Therefore it would have been obvious to combine the teachings of an object oriented tools kit as taught bu Rational Rose and Steinman with Gretta's ability to control thread execution rate because the ability to control devices in an automated process is essential for proper operations.

Claim 39

A method as recited in claim 38 wherein said control system is an electromechanical control system (**Steinman**, Col 4, lines 5 - 15, process controllers to control sensors and actuators).

Claim 40

A method as recited in claim 38 wherein said control system is a real-time control system (**Steinman**, Col 1, Technical Field of the Invention).

Claim 42

A method as recited in claim 38 wherein said received components represent a low level in a multi-level hierarchy of said control system (**Steinman,** Figure 3, sensors and actuators are receivers and attached to Application blocks in an Object Oriented system), said method further comprising: presenting a high level of said hierarchy, said high level including said received components and a high level component; choosing a second executable image for said high level component; and choosing a third executable image for said control system that includes said executable image and said second executable image, whereby when said third executable image is produced for said control system only those components that correspond to said executable image and said second executable image will be included. (Interpreted as the Principles of inheritance which is part of the rejection in claim 1 with the association of the software generated and the principle of Messaging in Object Oriented technology - both principles are inherent in Object Oriented technology).

Claim 43

A method as recited in claim 38 wherein said components are computer objects and said control system is implemented using object-oriented technology (**Steinman**, Col 1, Technical Field of the Invention).

Claim 44

A method as recited in claim 38 further comprising: loading components corresponding to said executable image into a real-time computer; and executing said executable image on said real-time computer (**Steinman**, Abstract, the loading is performed via static or dynamic linking).

Response to Arguments

9. Applicant's arguments filed November 20, 2002 and March 17, 2003 have been fully considered but they are not persuasive.

10. The following is a scanned copy of the Applicant's arguments with the Examiner's response.

Applicant's Arguments

The Examiner rejected claims 23-30 and 45 under 35 U.S.C. 103(a) as being unpatentable over the commercial product Rational Rose 4.0 released in 1996 in view of Steinman et al. (USPN 6,259,958 hereinafter Steinman). Regarding claim 23, the Examiner stated that Rational Rose teaches using an OOCASE tool for defining a mode control system citing page 13 of Rose, and the method comprising receiving a plurality of components that represent the control system (Rose, page 7); choosing a subset of the components to correspond to the mode (Rose, page 6 and 7); identifying an intuitive name for the mode and its corresponding subset of components (Rose, page 7); and for each chosen component in the subset (Rose, page 6), indicating in a file corresponding to the component (Rose, page 199) that the component is active when the control system is in the mode (Rose, page 7 and 199), whereby when the control system is executing in the mode only the subset of the components that correspond to the mode will be active (Rose,

page 177). The Examiner further stated that Rational Rose does not explicitly teach the context of a control system for controlling external devices/interfaces, but that Steinman teaches the tool set as supporting interfaces to external devices such as actuators and sensors and that it would have been obvious to combine the teachings of Rational Rose 4.0 with Steinman.

The Examiner failed to point out anything in the cited references that discloses or suggests defining a mode, as recited in claim 23. The list of design tools on page 13 of Rose does not list a mode. "

Examiner's Response

The rejection is a combination of the Object Oriented Computer Aided Software Engineering (OO-CASE) Tool as taught by Rational Rose version 4.0 released November 1996 and the Steinman reference where dynamic and static objects are linked to allow interfacing to devices such as sensors and actuators. The Applicant is stating the Examiner did not teach "defining a mode". The Examiner disagrees. Given the broadest reasonable interpretation in view of the Specification the term mode in the claims is inherent to mean ON and OFF. The two are the most basic inherent modes the claim language fails to overcome these inherent modes.

Applicant's Arguments

"Pages 6 and 7 of Rose does not disclose or suggest choosing a subset of the components of the control systems to correspond to the mode, as recited in claim 23. Rose on pages 7, 199, and 177, do not disclose or suggest indicating a file corresponding to the component that said component is active when the control system is executing in the mode only the subset of the components that

correspond to the mode are active. The Examiner did not point out anything in Steinman that discloses or suggest a mode. In addition, it would not be obvious to combine a control system of Steinman with the OOCASE tool of Rose. Page 3, lines 1-18, of the application discusses why the Rose tool does not provide sample-data processing needed for real-time control systems. Therefore it would not be obvious to use the Rose tool for real-time control systems. For at least these reasons, claim 23 is not made obvious by Rose in view of Steinman."

Examiner's Response

The Applicant attacks the OO-CASE tool Rational Rose stating it fails to teach sample-data processing as needed by a real time control system. The Applicant fails to address the fact that Steinmann clearly has objects to monitor the sensors which meets the broadest reasonable interpretation. The rejection is a combination. The attack on Rose is considered piecemeal.

In response to applicant's arguments against the references individually, one cannot show non obviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant's Arguments

"Claims 24-25 and 28-29 are ultimately dependent on claim 23, and are therefore respectfully submitted to be patentable over the art of record for at least the reasons set forth above with respect to claim 23. Additionally, these dependent claims require additional elements that when taken in the context of the claimed invention, further patentably distinguish the art of

record. For at least these reasons, claims 24-25 and 28-29 are not made obvious by Rose in view of Steinman."

Examiner's Response

For the same reasons above these claims are not deemed patentable as claimed.

Applicant's Arguments

"Regarding claim 27 the Examiner stated that in Steinman, Figure 3 the sensors and actuators are receivers and attached to the Application blocks in an Object Oriented system. Claim 27 is dependent on claim 23 and does not recite "receivers" but "received components". In addition, claim 27 recites a second mode and a third mode. The Examiner did not point out anything in the cited references that disclose or suggest a second mode and a third mode. For at least these reasons, claim 27 is not made obvious by Rose in view of Steinman."

Examiner's Response

First, the Applicant's argument regarding a difference between an "application block" and "received components" is not very detailed. The Steinman patent is an object oriented implementation where the parts of the diagram are considered components by definition. Furthermore, it is not clear if the Applicant is arguing design time versus terms from run time. the relationship of design is transformed into runtime, makes arguments looking from only one view with out regard to the relationship of the form of design and the function of runtime non persuasive. The Applicant's use of the terms mode is not distinctive and is very broad. If a

specific mode from the Specification would assist in distinguishing the claim the Applicant should claim it.

Applicant's Arguments

"Claim 30 is dependent on claim 23 and further recites switching from one mode to a different mode. The Examiner did not point out anything in Steinman or Rose that discloses switching modes. For at least these reasons, claim 30 is not made obvious by Rose in view of Steinman."

Examiner's Response

The term mode was explained above and the use of the term mode without any detail as to the specific mode is met by the broadest reasonable interpretation.

Applicant's Arguments

"Claim 45 recites receiving a plurality of components. Rose on page 7 does not disclose or suggest the step of receiving a plurality of components as argued by the Examiner. Claim 45 further recites defining at least one logical executable name at each level in said multi-level hierarchy. Rose, page 7, discussing the ability to name a class as shown in the diagram "MyClass 1 ", shows the ability to name one logical executable name at one level in a multi-level hierarchy, but not at each level of the multi-level hierarchy, as claimed. In addition, as discussed above, it would not be obvious to combine a control system of Steinman with the OOCASE tool of Rose. For at least these reasons, claim 45 is not made obvious by Rose in view of Steinman."

Examiner's Response

Applicant is taking a singular view of the Rational Rose product. The product teaches how to build components. Components are an inherent part of object technology. Why a developer using Rational Rose would attempt to model and build a system with a single component is not a logical.

Applicant's Arguments

"The Examiner rejected claims 31-44 under 35 U.S.C. 103(a) as being unpatentable over the commercial product Rational Rose 4.0 released in 1996 and Steinman et al. (USPN 6,259,958 hereinafter Steinman) as applied to claims 23-30 and 45 above, and further in view of Gretta."

Regarding claims 31 and 37, the Examiner stated that the limitation "defining a logical rate of execution at each level in the multi-level hierarchy" is taught by Gretta, Figure 8 and 9A stating that basic blocks are components of an executable image. The Examiner did not cite anything in the references that discloses or suggests a logical rate or defining a logical rate of execution. A logical rate of execution is not disclosed or suggested by Figures 8 and 9A of Gretta. In addition, as discussed above, it would not be obvious to combine a control system of Steinman with the OOCASE tool of Rose. For at least these reasons, claims 31 and 37 are not made obvious by Rose and Steinman in view of Gretta."

Examiner's Response

The Examiner disagrees that logical rate and defining a logical rate of execution was not taught by the introduction of the Gretta reference. the reference is riddled with features which control rate of execution. When taking the reference as a whole Figure 19 shows Schedule order,

feedback, ration control etc Figure 32C teaches setting priority figure 45A teaches Loop Time and has a sequence chart for events with duration. In the broadest reasonable interpretation the rejection meets the limitations and is maintained.

Applicant's Arguments

"Claims 32, 33, 35, and 36 are ultimately dependent on claim 31, and are therefore respectfully submitted to be patentable over the art of record for at least the reasons set forth above with respect to claim 31. Additionally, these dependent claims require additional elements that when taken in the context of the claimed invention, further patentably distinguish the art of record. For at least these reasons, claims 32, 33, 35, and 36 are not made obvious by Rose and Steinman in view of Gretta."

Examiner's Response

For the same reasons above the rejection is maintained.

Applicant's Arguments

"Claim 38 recites receiving a plurality of components. Rose on page 7 does not disclose or suggest the step of receiving a plurality of components as argued by the Examiner. In addition, as discussed above, it would not be obvious to combine a control system of Steinman with the OOCASE tool of Rose. For at least these reasons, claim 38 is not made obvious by Rose and Steinman in view of Gretta."

Examiner's Response

The argument toward a plurality of components was answered above and applies.

Applicant's Arguments

"Claims 39, 40, and 42-44 are ultimately dependent on claim 38, and are therefore respectfully submitted to be patentable over the art of record for at least the reasons set forth above with respect to claim 38. Additionally, these dependent claims require additional elements that when taken in the context of the claimed invention, further patentably distinguish the art of record. For at least these reasons, claims 39, 40, and 42-44 are not made obvious by Rose and Steinman in view of Gretta."

Examiner's Response

For the same reasons above the rejection is maintained.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

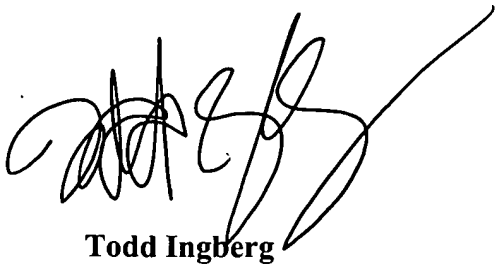
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence Information

12. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to **Todd Ingberg** whose telephone number is **(703) 305-9775.** The Examiner is working a Maxi-Flex schedule and can be reached Monday through Friday. If attempts to reach the examiner by telephone are unsuccessful, the **Examiner's Supervisor, Kakali Chaki** be reached at **(703)305-9662.** Any response to this office action should be mailed to: **Director of Patents and Trademarks Washington, D.C. 20231**, or **Hand-delivered** responses should be brought to **Crystal Park II, 2121 Crystal Drive Arlington, Virginia, (Receptionist located on the fourth floor),** or **faxed.** The following **fax numbers** apply:

Official	**(703) 746 - 7239**
Non Official/ Draft	**(703) 746 -7240**
After Final	**(703) 746 - 7238**



Todd Ingberg

Patent Examiner

Art Unit 2124

March 19, 2003